Title V

Model General Permit Template

SERIES 1 OIL FIELD FUGITIVES

Templa#ESJV-FG-1-0

components which serve light crude oil or gases at light crude oil and natu production facilities, and

are subject to the requirements of District Rule 4403 except section 5.2 and 6.1

This template is designed to streamline the Title V permitting process for oil field fugitives meeting the above qualifications. Applicants for Title V permits choosing to use this template will only have complete the enclosed template qualification form and submit it with their Title V application.

San Joaquin Valley Unified Air Pollution Control District

Final Title V Model General Permit Template Series 1 Oil Field Fugitives

Template No: SJV-FG-1-0

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San Joaquin Valley Unified Air Pollution Control District

Title V General Permit Template SJV-FG-1-0

Engineering Evaluation

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I. Purpose

The purpose of the proposed template is to streamline the Title V permitting process by identifying the federally applicable requirements for certain components at light crude oil and gas production facilities and to establish permit conditions which will ensure compliance with such requirements. These conditions will be incorporated into the Title V permit of any facility choosing to make use of the template.

II. Template Applicability

The template applies to components which:

Serve light crude oil or gases at light crude oil and natural gas production facilities, and

Are subject to the requirements of District Rule 4403.

The applicability of this template is determined by completion of the Template Qualification Form (TQF) attached as Appendix B. The completed and signed TQF must be submitted with the Title V application.

III. Applicable Requirements

Units may be subject to "federally enforceable " requirements as well as requirements that are enforceable by the "District-only." Federally enforceable requirements will be enforceable by the EPA, the District, and the public through Title V permit conditions identified as federally enforceable. District-only requirements represent local or state regulations for which the EPA has no direct enforcement authority. The final Title V permits issued by the District will contain both federally enforceable and District-only requirements.

District-only requirements are not addressed in this template except for those used in streamlining of multiple requirements (see discussion in section IV). District-only requirements used in streamlining of multiple requirements will become federally enforceable. Table 1, <u>Applicable Requirements</u>, does not necessarily include all federally enforceable requirements that apply to oil field fugitives qualifying to use this template, and it is the source's responsibility to determine any and all applicable requirements to which the source is subject. Generally, requirements not addressed by this template are those that require a source-specific analysis, or are covered by other templates.

Table 1. Applicable Requirements

Rule Category	Rule/Regulation	Citation	Description
A	SJVUAPCD Reg. II	2520, 9.4.2 and 9.5.2	Periodic Monitoring and Recordkeeping
A	SJVUAPCD Reg. IV	4403 (465.3) except sections 5.2 and 6.1	Components Serving Light Crude Oil or Gases at Light Crude Oil and Gas Production Facilities and Components at Natural Gas Processing Facilities
В	SJVUAPCD Reg. II	2201	New Source Review Rule
В	SJVUAPCD Reg. II	2520	Federally Mandated Operating Permits
С	SJVUAPCD Reg. II	4403, 5.2 and 6.1	Components Serving Light Crude Oil or Gases at Light Crude Oil and Gas Production Facilities and Components at Natural Gas Processing Facilities

Category "A" rules contain requirements that are directly applicable to the qualifying units; compliance with these applicable requirements will be demonstrated in this engineering evaluation and assured by the template permit conditions. In section IV, <u>Compliance</u>, the federally-enforceable requirements from category "A" rules are listed with a discussion of how compliance with these requirements is achieved.

Category "B" rules contain federally enforceable requirements that were not addressed in this template. These may not be all of the federally enforceable requirements for this unit. Requirements from these rules must be addressed by the applicant outside of this template within the Title V application Compliance Plan form (TVFORM-004). Category "B" listing is included in this table as an informational item to assist applicants in this effort.

Category "C" rules contain requirements which have been determined not to be applicable to qualifying units. A permit shield is proposed for the category "C" rules. An explanation of the determination of non-applicability of category "C" rules is included in the permit shield section of this evaluation.

IV. Compliance

This section contains a discussion of how compliance is assured with each requirement addressed in this template.

District Rule 2520, 9.4.2 and 9.5.2

Section 9.5.2 requires all records be maintained for at least five years. Template permit condition #19 requires that all records be maintained for at least five years.

District Rule 4403 (formerly SJVUAPCD Rule 465.3)

District Rule 4403 limits fugitive VOC emissions from qualifying components by providing monitoring, recordkeeping, and reporting requirements. The rule requires operators of qualifying units to maintain an operator management plan (OMP) on file with the District. The OMP must include the following:

- 1) a description of any hazard which might affect the safety of the inspector;
- 2) identification of process units which cannot be immediately shut down for repair of leaks;
- 3) a heavy liquid stream inspection exemption list identifying process components exclusively handling heavy liquids;
- 4) specific identification of the resource commitment to a program to implement, inspect, and repair components;
- 5) a detailed schedule of quarterly inspections to be conducted in accordance with the test method in District Rule 4403, 6.3.4, including identification of components for which as exemption, in accordance with District Rule 4403, 4.0 is requested; and
- 6) repair procedures, to be used within 15 calendar days following leak detection, which results in compliance with the requirements of this rule.

Because submittal of an OMP is a startup requirement for a source subject to this rule, it is not addressed as a permit condition, but is referenced in some template permit conditions. The monitoring, recordkeeping, and reporting requirements of the rule are addressed in the template permit conditions (see template permit conditions #1 - #18).

Permit condition #9 contains a reference to 40CFR60.18 as a requirement for those facilities using flares as control devices for fugitive emissions. This requirement is addressed in the template developed for flares (SJV-FL-1).

V. Permit Shield

A permit shield, according to District Rule 2520, 13.2, legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Title V permit is considered compliance with all applicable requirements upon which those conditions are based. A permit shield is requested in template permit condition #20.

A permit shield will also be granted for District Rule 4403, section 5.2 which covers requirements for natural gas processing facilities. This template only

applies to components which serve light oil crude or gas at light oil and natural gas production facilities. Components which serve natural gas processing facilities is covered in the "gas plant" template (SJV -GP). A permit shield is requested in template permit condition #21.

VI. Permit Conditions

The following conditions will be incorporated into the Title V permit of any facility choosing to make use of template #SJV-FG-1-0:

- 1. Each hatch shall be closed at all times except during sampling or attended maintenance operations. [District Rule 4403, 5.1.1]
- 2. A leak shall be defined as any of the following: 1) the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs; or 2) a reading as methane in excess of 20,000ppm above background when measured at a distance of one (1) centimeter from the potential source in accordance with EPA method 21 with the instrument calibrated with methane. [District Rule 4403, 3.2.1]
- 3. All components containing VOCs shall be inspected by the facility operator annually to ensure compliance with the provisions of this permit. The inspections shall be conducted in accordance with EPA Method 21, with the instrument calibrated with methane. If two (2) percent or more of the qualifying components are found to leak during an annual inspection, the inspection frequency for that type of component shall be changed from annual to quarterly. If less than two (2) percent of the qualifying components are subsequently found to be leaking during five (5) consecutive quarterly inspections, the inspection frequency for that type of component may be changed from quarterly to annual. [District Rule 4403, 5.1.2]
- 4. Components that have been identified in the operator management plan as located in inaccessible location shall be inspected and repaired at least annually. Components that have been identified in the operator management plan as located in areas which cause inspection to be unsafe for personnel shall be inspected and repaired at the next process unit turnaround. [District Rule 4403, 5.1.3]
- 5. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the requirements of District Rule 4403. [District Rule 4403, 5.1.4]
- 6. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 4403, 5.1.5]

- 7. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection pursuant to District Rule 4403, 5.3 shall not be in violation per Rule 4403, 5.1.2. [District Rule 4403, 5.1.6]
- 8. The number of leaks of a component type exceed shall not exceed one (1) component, or two (2) percent of that type that were inspected, whichever is greater, and that are subject to the requirements of this rule. For inspections conducted by District personnel to determine compliance, the number of components inspected shall constitute a statistically representative sample for each component type. [District Rule 4403, 5.1.7]
- 9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 4403, 5.3.1]
- 10. Any vapor control device, other than a flare, used to comply with District Rule 4403, section 5.3.1 shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2 and District Rule 4403, 5.3.1]
- 11. If a leaking component is an essential part of a critical process identified in the operator management plan and which cannot be immediately shut down for repairs, the operator shall: 1) minimize the leak within 15 calendar days, and 2) if a leak which has been minimized still exceeds the limits in defined in the permit conditions, as applicable, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. [District Rule 4403, 5.3]
- 12. Each operator shall maintain an inspection log containing, at a minimum, the following: 1) name, location, type of components, and description of any unit where leaking components are found; 2) date of leak detection, emission level (ppm) of leak, and method of detection; date and emission level of recheck after leak is repaired; 3) total number of components inspected, and total number and percentage of leaking components found; 4) identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 4403, 6.2]

- 13. Any component leak identified by a Notice to Repair issued by the District shall be repaired and reinspected as specified in District Rule 4403, 5.1.4, and 5.1.5, as appropriate. [District Rule 4403, 5.3.2]
- 14. Samples shall be analyzed by using ASTM Methods E-260-73, E-168-67, or E-169-63 and analysis of halogenated exempt compounds shall be analyzed by ARB Method 432. [District Rule 4403, 6.3.1]
- 15. Emissions of VOC shall be measured by EPA Method 25, 25a, or 25b, as applicable, and analysis of halogenated exempt compounds shall be analyzed by ARB Method 422. [District Rule 4403, 6.3.2]
- 16. The True Vapor Pressure (TVP) of organic liquids, including light crude and petroleum distillates, shall be determined as specified in District Rule 4403, 6.3.3 (Amended February 16, 1995). [District Rule 4403, 6.3.3]
- 17. Leak detection shall be performed in accordance with EPA Method 21, with the instrument calibrated with methane. [District Rule 4403, 6.3.4]
- 18. API gravity of crude oil shall be determined by using ASTM D-1298-85. [District Rule 4403, 6.3.5]
- 19. Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.5.2]
- 20. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4403 except section 6.1(Amended February 16,1995). A permit shield is granted from this requirement. [District Rule 2520, 13.2]
- 21. The requirements of SJVUAPCD Rules 4403, Se**£tiper6d2d** February 16,1995), does not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

APPENDIX A

EPA COMMENTS / DISTRICT RESPONSE FOR TEMPLATE #SJV-FG-1-0

EPA COMMENTS / DISTRICT RESPONSE

The EPA's comments regarding oil field fugitives templates are encapsulated below followed by the District's response. A copy of the EPA's 12/11/96 letter is available at the District.

III. Applicable Requirements

1. EPA COMMENT

This section should be revised to clarify that federally enforceable requirements in title V permits will be enforceable not only by EPA and the public, but by the District as well.

DISTRICT RESPONSE

This section was revised to clarify that title V permits will be enforceable by the District as well as the EPA and the public.

2. EPA COMMENT

The template should explain that the category "B" rules listed in Table 1 may not be all of the federally enforceable requirements for the unit, and that it is the source's responsibility to determine any and all applicable requirements to which the source is subject.

DISTRICT RESPONSE

The template was revised to explain that the category "B" rules listed in Table 1 may not be all of the federally enforceable requirements for the unit, and that it is the source's responsibility to determine any and all applicable requirements to which the source is subject.

V. Permit Shield

1. EPA COMMENT

Because Title V does not allow sources to be shielded from future requirements, the adoption date of rules that are included in the permit shield must be cited. Including the adoption date of each rule would ensure that sources have a clear understanding of which version of the rule is shielded.

DISTRICT RESPONSE

The adoption dates and the last amended dates were both added to the rules under the permit shield condition.

2. EPA COMMENT

A permit shield may not be provided for provisions of an applicable requirement that are not addressed by the permit conditions. The templates do not address several requirements of Rule 4403 including the section 5.2 requirements applicable to natural gas processing facilities and the section 6.1 requirements for the operator management plan. The template may not provide a permit shield for these provisions of Rule 4403.

DISTRICT RESPONSE

Section 5.2 of rule 4403 addresses natural gas processing facilities. This template is not applicable to natural gas processing facilities. The gas plant templates cover this section of rule 4403 along with the NSPS from the CFR.

Section 6.1 of rule 4403 addresses the operator management plans (OMP). Because submittal of an OMP is a startup requirement and is source specific, it is not addressed in this template.

Section 5.2 and 6.1 have been added to category "C" rules and the following permit condition was added to the template;

The requirements of SJVUAPCD Rules 4403, Sections of Education 16,1995), does not apply to this source. A permit shield is granted from these requirements.

VI. Permit Conditions

1. EPA COMMENT

Many of the terms used in the permit conditions have very specific meanings as defined in District Rule 4403. Therefore, the permit should contain a condition that states the definitions in the rules cited as the origin and authority for each permit condition shall apply to that condition. Otherwise, if a permit shield is in place, there could be disputes about how the requirements should be interpreted.

DISTRICT RESPONSE

A similar condition was added to the umbrella template stating "When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply." If a facility chooses not to use the umbrella the above condition will be added as a permit condition.

2. EPA COMMENT

Given that a permit shield is provided such that compliance with the conditions of the permit will be considered compliance with requirements of Rule 4403 addressed by the permit, condition 2 and 4 should refer to compliance with the provisions of this permit rather than District Rule 4403. Likewise, condition 7 should refer to a facility being in violation of the permit conditions rather than Rule 4403, section 5.1.

DISTRICT RESPONSE

The District prefers not to reference other conditions within a condition in order to avoid confusion later when the permit is drafted. The District feels it is best to reference the District Rule.

3. EPA COMMENT

Pursuant to Rule 4403, section 5..1.2, condition 2 must state that if "less than two (2) percent of the qualifying components are subsequently found to be leaking during the five (5) consecutive quarterly inspection frequency for that type of component may be changed from quarterly to annual.

DISTRICT RESPONSE

The condition discussed above was modified to the following:

All components containing VOCs shall be inspected by the facility operator annually to ensure compliance with the provisions of this permit. The inspections shall be conducted in accordance with EPA Method 21, with the instrument calibrated with methane. If two (2) percent or more of the qualifying components are found to leak during an annual inspection, the inspection frequency for that type of component shall be changed from annual to quarterly. If less than two (2) percent of the qualifying components are subsequently found to be leaking during five (5) consecutive quarterly inspections, the inspection frequency for that type of component may be changed from quarterly to annual.

4. EPA COMMENT

We recommend revising condition 3 as follows to be consistent with Rule 4403:

"Components that have been identified in the operator management plan as located in inaccessible location <u>shall be inspected and repaired at least annually.</u> Components that have been identified in the operator management plan as er in areas which cause inspection to be unsafe for personnel shall be inspected and repaired at least annually at the next process unit turnaround."

DISTRICT RESPONSE

The condition discussed above was modified to the following:

Components that have been identified in the operator management plan as located in inaccessible location shall be inspected and repaired at least annually. Components that have been identified in the operator management plan as in areas which cause inspection to be unsafe for personnel shall be inspected and repaired at the next process unit turnaround.

5. EPA COMMENT

Condition 6 should be revised as follows: "...awaiting reinspection pursuant to District Rule 4403, 5.3 condition 11 shall not be..." Once the template condition are incorporated into a source's title V permit, the condition number may need to be changed to correspond to the new number for condition 11.

DISTRICT RESPONSE

The District prefers not to reference other conditions within a condition in order to avoid confusion later when the permit is drafted. The District feels it is best to reference the District Rule.

6. EPA COMMENT

For purposes of clarity, we recommend that the template state explicitly the definition of "leak" and "leak-free." In particular, condition 9 should specify the limits instead of referring to District Rule 4403, 3.2.1 or 3.3.1. In addition, Rule 4403, 3.3.1 does not apply to units covered by this template since the template does not address components at natural gas processing facilities.

DISTRICT RESPONSE

The following condition was added to the template:

A leak shall be defined as any of the following: 1.) the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs; or 2.) a reading as methane in excess of 20,000ppm above background when measured at a distance of one (1) centimeter from the potential source in accordance with EPA method 21 with the instrument calibrated with methane.

The District prefers not to reference other conditions within a condition in order to avoid confusion later when the permit is drafted. The District feels it is best to reference the District Rule.

7. EPA COMMENT

The template should specify that required frequency of source tests using Method 25 to demonstrate that a vapor control device used to comply with condition 8 meets the 95% control efficiency requirement. We recommend requiring annual tests.

DISTRICT RESPONSE

The following condition was added to the template:

Any vapor control device, other than a flare, used to comply with District Rule 4403, section 5.3.1 shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually

8. EPA COMMENT

The cite for condition 8 is section 5.3.1 instead of 5.1.7.

DISTRICT RESPONSE

The reference has been changed accordingly.

9. EPA COMMENT

Condition 11 should be revised as follows: "...repaired and reinspected as specified in District Rule 4403, 5.1.4, 5.1.5, 5.2.7, 5.2.8 and 5.2.9 as appropriate conditions 4 and 5." Once the template conditions are incorporated into a source's title V permit, the condition number may need to be changed to correspond to the new numbers for conditions 4 and 5. Also, the District should note that Rule 4403, 5.2.7, 5.2.8, and 5.2.9 are not applicable since the template does not address requirements for components at natural gas processing facilities.

DISTRICT RESPONSE

The District prefers not to reference other conditions within a condition in order to avoid confusion later when the permit is drafted. The District feels it is best to reference the District Rule.

The District has taken out the reference to Rule 4403, 5.2.7, 5.2.8, and 5.2.9. out of the condition.

10. EPA COMMENT

Any reference to District Rule 4403, such as the reference to the method for determining true vapor pressure (condition 14), should include the adoption date (2/16/95) of the SIP-approved rule.

DISTRICT RESPONSE

The adoption date was added to condition 14.

11. EPA COMMENT

The permit shield in condition 18 must state that a shield is not provided for sections 5.2 and 6.1 of Rule 4403. These provisions are not addressed by the template.

DISTRICT RESPONSE

Both section 5.2 and 6.1 do not apply to this template. Therefore, the following condition was added to the template:

The requirements of SJVUAPCD Rules 4403, Sections 5.2 raned &et (February 16,1995), do not apply to this source. A permit shield is granted from these requirements.

12. EPA COMMENT

The template should add a condition that requires the source to conduct quarterly inspections in accordance with the schedule contained in the operator management plan it submits to the District.

DISTRICT RESPONSE

For Section 5.1 requires light crude oil and gas production facilities to test all components containing VOCs annually. Quarterly inspections is required only if 2% or more of the components are found to be leaking at any one time. This is already addressed in the conditions.

Section 5.2 requires natural gas processing facilities to inspect all components quarterly if less than 2% of the components are found to be leaking for 5 consecutive quarterly inspection than the frequency of the inspection may be changed from quarterly to annually. However, this template does not apply to this section of the rule and a permit shield is not given to applicant for this section.

Section 6.1 addresses administrative requirements for operator management plans. It is the Districts understanding that administrative requirement were not to be conditions within the template. Thus, the District has not asked for a permit shield for this section of the rule.

13. EPA COMMENT

The template should add a condition that requires the source to submit changes to the operator management plan to the District before implementing the changes.

DISTRICT RESPONSE

The condition that was discussed above is an administrative requirement and it is the Districts understanding that administrative requirement were not to be conditions within the template.

Template Qualification From

1. EPA COMMENT

Question 2 in the qualification form should be revised to state: "If "yes," "no" then continue to next question; otherwise STOP - you cannot use this template."

DISTRICT RESPONSE

The qualifier has been changed appropriately.

2. EPA COMMENT

The last question in the qualification form should be revised to state: "If "no," continue to next question you qualify to use this template; otherwise, STOP - you cannot use this template.

DISTRICT RESPONSE

The qualifier has been changed appropriately.

3. EPA COMMENT

The compliance certification language must be made consistent with part 70 requirements: "Based on information and belief formed after reasonable inquiry:

1) the information on this form is true, accurate, and complete and 2) the facility is in compliance with this template's permit conditions."

DISTRICT RESPONSE

The compliance certification language has been changed appropriately.

4. EPA COMMENT

We suggest that the template qualifications form also provide information on the origin and authority of the qualification terms. This will assist the source in determining its eligibility to use the template condition.

DISTRICT RESPONSE

Each qualifier in the template has been cited.

APPENDIX B

TEMPLATE QUALIFICATION FORM FOR TEMPLATE #SJV-FG-1-0

Title V General Permit Template Qualification Form

District permit #_	a questions in the table below. A component which meets the criteria of this table
	e questions in the table below. A component which meets the criteria of this table this template as part of a Title V application. To use this template, remove this
sheet and attach t	·
Yes No	Description of Qualifying Units
	Does the component serve light crude oil or gases at light crude oil and gas production facilities [District Rule 4403, 2.0] If "yes", then continue to next question; otherwise STOP - you cannot use this template.
	Does the component handle only natural gas with less than 10% by weight VOC as determined by ASTM Methods E-260-73, E-168-67, or E-163-63? [District Rule 4403, 4.1] If "no" then continue to next question; otherwise STOP - you cannot use this template.
	Does the component exclusively handle heavy liquid streams which have less than 10 percent by weight evaporation at 150°C as determined by ASTM Method D-86-76, <u>and</u> has the operator so identified the component in a written heavy liquid inspection list? [District Rule 4403, 4.1.2] If "no", continue to next question; otherwise STOP - you cannot use this template.
	Is the component subject to the requirements of District Rule 4623 (Storage of Organic Liquids) or Rule 4401 (Steam Enhanced Crude Oil Production Well Vents)? If "no", continue to next question; otherwise STOP - you cannot use this template.
	Does the component handle liquid with a water content of 90 percent or more (after initial oil/water separation)? [District Rule 4403, 4.1.3] If "no", then continue to next question; otherwise STOP- you cannot use this template.
	Does the component handle streams with a VOC content (excluding ethane if the ethane stream being handled is less than 20 percent by volume) less than ten percent by weight, as determined by the test methods in District Rule 4403, 6.3.1, <u>and</u> is the component so identified in the operator management plan? If "no", you qualify to use this template; otherwise, - you cannot use this template.
	ation and belief formed after reasonable inquiry: 1) the information on this urate, and complete and 2) the facility is in compliance with this template's s.
Signature of Res	ponsible Official Date
Name of Respor	usible Official (Please print)